

Notice of Allowability

Application No.

10/690,303

Examiner

Kaushikkumar Patel

Applicant(s)

MODHA, DHARMENDRA S.

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/21/2003.
2. ☒ The allowed claim(s) is/are 1-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 10/21/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on October 21, 2003 is being considered by the examiner.

Allowable Subject Matter

2. Claims 1-30 are allowed.
3. The following is an examiner's statement of reasons for allowance:

As per independent claims 1, 3, 12, 21, and 30, prior art of records fail to teach cache memory with plurality of disjoint lists or pages and maintain identifiers (bits) to indicate whether the bits have short-term or long-term utilities and also maintains a temporal window parameter p , such that the sizes of the disjoint lists are adjusted based on varying workload to adaptively vary the proportions of pages marked as short-term utility and those marked as long-term utilities in order to improve cache hit ratio of the cache memory.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mattson et al. (4,463,424) teaches cache manager, which dynamically selects pageable groups of data from a database to store in the cache and divides the cache into equivalence classes such that all items in the same class have the same stack distance and this permits selecting the cache size from a set of p possible cache sizes.

Rodriguez (US 6,748,491 B2) teaches an LRU-LFU cache with one or more stacks of cache entries where the number of stacks corresponds to the number of frequency groups and then particular stack may have a length based on the frequency count.

Girkar et al. (US 6,378,043 B1) teaches method of maintaining set of buffers and buffers are partitioned into divisions according to profit values generated.

Cherkauer et al. (US 6,631, 446 B1) teaches a classes of buffers based on the frequency and threshold value during certain time periods. The threshold value is adjusted based on varying workload.

Rodriguez (US 6,745,295 B2) teaches an adaptive cache based on varying workload.

Gay et al. (4,802,086) teaches a cache with history buffer and cache replacement technique using FINUFO.

Megiddo et al. (US 2004/0098541 A1) teaches an adaptive replacement policy dynamically maintaining two lists of pages, a recency list and frequency list.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaushikkumar Patel whose telephone number is 571-272-5536. The examiner can normally be reached on 8.00 am - 4.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Kaushikkumar Patel
Examiner
Art Unit 2188

Mano Padmanabhan
1/18/06

**MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER**